

Swinomish language for BLM-based copper criteria for protection of aquatic life:

In the toxics criteria table, the entry for copper aquatic life criteria is simply a footnote, footnote “o” in this case. Then footnote “o” says:

Freshwater copper criteria shall be developed using EPA’s current Biotic Ligand Model (BLM current criteria document: EPA-822-R-07-001). When criteria are developed such criteria must be protective of aquatic life for all expected water quality conditions. A minimum number of 24X samples over two years, reflecting intra-annual or seasonal flow and spatial variability related water quality variability must be collected. If inter-annual or spatial variability in water quality occurs regularly, the monitoring plan shall reflect these characteristics. In the absence of sufficient ambient data for any of the BLM input parameters, default values corresponding to the 10th percentile of the applicable ecoregional dataset for the relevant stream order for each missing parameter shall be used. Default values shall be found in EPA’s Missing Parameters Technical Support Document (EPA 820-R-15-106), hereby incorporated by reference. All BLM criteria shall be made available on the Tribe’s website.

Similar language could be used for aluminum, though for Al, the variables are pH, hardness, and DOC. pH should really be measured, since it is easy to measure and generally reflects specific site conditions – it’s hard to reliably establish a reference condition. Here’s possible text for aluminum, again included in the footnotes and referenced from the toxics criteria table without a value in the table:

Aluminum criteria shall be developed using EPA’s current Multiple Linear Regression model (MLR current criteria document: EPA-822-R-18-001). When criteria are developed such criteria must be protective of aquatic life for all expected water quality conditions. A minimum number of 24 samples over two years, reflecting intra-annual or seasonal flow and spatial variability related water quality variability must be collected. If inter-annual or spatial variability in water quality occurs regularly, the monitoring plan shall reflect these characteristics. In the absence of sufficient ambient data for the input parameters dissolved organic carbon or hardness, default values corresponding to the 10th percentile of the applicable ecoregional dataset for the relevant stream order for each missing parameter shall be used. Default values shall be found in EPA’s Missing Parameters Technical Support Document (EPA 820-R-15-106), hereby incorporated by reference. All MLR criteria shall be made available on the Tribe’s website.